

MERCHANT VESSEL BOARDINGS

Objectives

To successfully complete this assignment you must study the text and master the following objectives:

- ♦ **LIST** the laws which allow the Coast Guard to conduct merchant vessel boardings.
 - ♦ **LIST** the nine types of vessels that require inspection under the law.
 - ♦ **IDENTIFY** the regulations created from the laws which allow the Coast Guard to conduct merchant vessel boardings.
 - ♦ **IDENTIFY** the types of boardings conducted on merchant vessels.
 - ♦ **LIST** the licenses and documents issued to U.S. merchant mariners.
 - ♦ **IDENTIFY** the titles and responsibilities of officers and crewman on merchant vessels.
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References

The information contained in this lesson can be found in the following references:

- ♦ 14 USC 89
 - ♦ 46 USC Subtitle II
 - ♦ MARPOL 73/78
 - ♦ 33 CFR
 - ♦ 46 CFR
 - ♦ Marine Safety Manual, VOL I
 - ♦ Marine Safety Manual, VOL II
 - ♦ International Convention for the Safety of Life At Sea (SOLAS)
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Resident Training Requirements

This lesson covers the introductory performance qualifications for the following resident training courses:

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OVERVIEW

Introduction

Since you should now be able to identify the different types of merchant vessels, we can now discuss the laws and regulations which apply to these vessels. This lesson will identify boarding types, manning requirements, and the licenses and documents required for the personnel who man these vessels.

Outline

In this lesson we are going to discuss:

- ♦ **Vessel Boarding Laws, Regulations, and International Conventions**

- 14 USC 89
- 46 USC Subtitle II
- vessels subject to inspection
- 46 CFR 1-199
- operating subchapters
- general and engineering subchapters
- 33 CFR 1-199
- uninspected vessels
- international standards

- ♦ **Boarding Types**

- inspections
- examinations
- investigation

- ♦ **Merchant Mariner Licenses and Documents**

- types
- unlicensed crewmembers

- ♦ **Vessel Manning Requirements**

- departments
- officers and crew

VESSEL BOARDING LAWS, REGULATIONS, AND INTERNATIONAL CONVENTIONS

Introduction

The Coast Guard enforces numerous laws and regulations in the Marine Safety field. Under 14 USC 2, the Coast Guard is required to enforce or assist in the enforcement of all applicable Federal laws and regulations on or under the high seas or waters subject to the jurisdiction of the United States. As a Coast Guard Petty, Warrant, or Commissioned Officer, you have been granted authority under 14 USC 89, 14 USC 143 and 19 USC 1401 to conduct boardings of vessels subject to the laws of the United States.

14 USC 89

14 USC 89 is the basic statutory authority for Coast Guard law enforcement boardings. It states that commissioned, warrant, and petty officers may make inquiries, examinations, inspections, searches, and arrests on vessels subject to the jurisdiction of the United States.

46 USC Subtitle II

Under 46 USC Subtitle II, Chapters 31–43 the Coast Guard is given jurisdiction to inspect vessel hulls and machinery to determine whether or not they meet minimum safety and construction requirements. If a vessel meets the set standards, a **Certificate of Inspection (COI)** is issued which authorizes a vessel to operate in a specific service and upon specific waters. The COI also specifies the number of passengers (if any) that may be carried on board.

This authority is delegated to the Officer in Charge, Marine Inspection (OCMI) and those persons the OCMI may assign as Marine Inspectors. In addition, Coast Guard boarding officers are authorized to inspect the certificate and to check that all limitations and conditions under which the vessel operates comply with the certificate.

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VESSEL BOARDING LAWS, REGULATIONS, AND INTERNATIONAL CONVENTIONS (CONT.)

46 USC Subtitle II (cont.)

Jurisdiction over vessel inspection varies according to vessel type and size. While not all inclusive, vessels generally requiring inspection and certification include:

- ◆ All commercial (merchant) vessels propelled by steam.
- ◆ All tank vessels carrying flammable or combustible liquids, or other hazardous liquids in bulk.
- ◆ Most freight vessels (i.e., break-bulk ships, container ships).
- ◆ Seagoing vessels over 300 gross tons propelled by means other than steam, such as internal combustion engines.
- ◆ Most vessels carrying passengers.

Title 46 CFR contains the regulations for the specific inspection requirements depending on the type of vessel.

Vessels Subject to Inspection

Inspected vessels are those vessels required to be inspected, by law, and which are prohibited from operating unless they hold a valid Certificate of Inspection (COI), or Certificate of Compliance (COC) issued or accepted by the Coast Guard.

46 USC 3301 succinctly lists the vessels requiring inspection for certification. This law consolidates all vessels requiring inspection into nine vessel types. These are:

- ◆ freight vessels
- ◆ nautical school vessels
- ◆ offshore supply vessels
- ◆ passenger vessels
- ◆ sailing school vessels
- ◆ seagoing motor vessels
- ◆ small passenger vessels (T & K)
- ◆ steam vessels
- ◆ tank vessels

You might logically conclude that any vessel which carries freight is a freight vessel and, therefore, required to be inspected.

The inspected vessel types are defined in 46 USC 2101. While the vessel described above is certainly a freight vessel by the general use of the phrase, it may not meet the parameters of "freight vessel" as defined in 46 USC 2101.

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VESSEL BOARDING LAWS, REGULATIONS, AND INTERNATIONAL CONVENTIONS (CONT.)

Vessels Subject to Inspection (cont.)

The following descriptions of the vessels subject to inspection are paraphrased from the text in 46 USC 2101:

- ◆ **Freight Vessel** – Means a motor vessel of more than 15 gross tons that carries freight for hire, except an oceanographic research vessel or an offshore supply vessel.
- ◆ **Nautical School Vessel** – Means any vessel operated by or in connection with a nautical school.
- ◆ **Offshore Supply Vessel** – Means a motor vessel of more than 15 gross tons, but less than 500 gross tons that normally carries supplies or equipment in support of the offshore mineral and oil industry.
- ◆ **Passenger Vessel** – Means any vessel of at least 100 gross tons carrying at least one passenger for hire.
- ◆ **Sailing School Vessel** – Is a vessel propelled primarily by sail that is less than 500 gross tons, and carries at least six sailing school instructors or students.
- ◆ **Seagoing Motor Vessel** – Is a motor vessel of at least 300 gross tons which goes outside of Inland waters. (Fishing vessels are exempted).
- ◆ **Small Passenger Vessel** – Is any vessel of less than 100 gross tons and:
 - ◆ Carrying more than six passengers, including at least one passenger for hire.
 - ◆ Chartered with the crew provided or specified by the owner or the owner's representative and carrying more than six passengers.
 - ◆ Chartered with no crew provided or specified by the owner or the owner's representative and carrying more than 12 passengers.
 - ◆ A submersible vessel carrying at least one passenger for hire.
- ◆ **Steam Vessel** – Is a vessel propelled in whole or partially by steam, except a recreational boat of not more than 40 feet in length.
- ◆ **Tank Vessel** – Is any vessel that is constructed or adapted to carry, or that carries, oil or hazardous liquids in bulk as cargo or cargo residue.

Note: A **motor vessel** is a vessel propelled by machinery other than steam. **For hire** means that the vessel receives some form of compensation, directly or indirectly, for carrying cargo or persons.

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VESSEL BOARDING LAWS, REGULATIONS, AND INTERNATIONAL CONVENTIONS (CONT.)

Vessels Subject to Inspection (cont.)

From the descriptions of the vessels requiring inspection it is obvious that any given commercial vessel might require inspection under more than one of the definitions. For example: A steam driven ship carrying oil in bulk is required to be inspected as a "steam vessel" and a "tank vessel."

It is also significant that foreign vessels meeting the above descriptions also require inspection. Under 46 USC 3303, the U.S. accepts International Certificates of Fitness issued under the International Convention for Safety of Life at Sea (SOLAS) as satisfactory evidence of lawful inspection considered similar to the United States. Therefore, foreign vessels are normally examined only to the degree necessary to ensure satisfactory condition of its propulsion equipment and lifesaving equipment. Foreign tank vessels and passenger vessels do receive a more comprehensive examination and are issued certificates of compliance by the Coast Guard.

The remaining sections of 46 USC, Chapter 33 (46 USC 3302–3318) address the issues concerning exemptions, carrying persons in addition to the crew on cargo vessels, the scope and frequency of required inspections and examinations, and most relevant to this discussion, 46 USC 3306 authorizes prescribing regulations for the inspection of the above noted vessels.

46 CFR 1–199

The primary regulations regarding inspection of vessels are found in Title 46 CFR Parts 1–199 (Shipping). The CFR Parts are divided among several Subchapters; each subchapter pertains to specific subject matter. While all of the regulations within 46 CFR address "shipping" the focus of this lesson will be only those portions of these regulations which deal specifically with the material inspection of vessels. The regulations of concern are basically divided into two groups:

- ♦ **Operating Subchapters** – These subchapters detail requirements by vessel type or class, for the design and operation of inspected vessels, and establish minimal requirements for uninspected vessels.
- ♦ **General and Engineering Subchapters** – These subchapters are the ones which detail requirements that, generally, apply to all inspected vessels.

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VESSEL BOARDING LAWS, REGULATIONS, AND INTERNATIONAL CONVENTIONS (CONT.)

46 CFR 1-199 (cont.)

The operating subchapters do not necessarily follow the nine "inspected vessel" types previously discussed, but all nine types are included within the requirements of the various operating subchapters. Generally, each operating subchapter will include Parts which cover each of the following subjects:

- ♦ **General Provisions** pertaining to that vessel type. This part will always contain an applicability statement which details which vessels must comply with the subchapter.
- ♦ **Inspection and Certification** requirements includes frequency of inspections and examinations and the scope of inspection.
- ♦ **Hull Construction and Arrangement** of vessels addresses acceptable materials used in construction, accommodation spaces for passenger and crew, and cargo spaces, ventilation, guard railings, etc.
- ♦ **Lifesaving Equipment** required includes lifeboats, life rafts, life preservers, ring buoys, etc.
- ♦ **Fire Protection Equipment** required includes fire extinguishers, fire pumps, fixed extinguishing systems, etc.
- ♦ **Operations** requirements includes required tests and drills, reports and logbook entries, markings, prohibited and special operations, navigation equipment, etc.
- ♦ **Special Rules** applicable to the specific vessel type.

Operating Subchapters

As noted above, all "inspected vessels" as listed in 46 USC 3301 are included under at least one of the following operating subchapters. The subchapters are listed out of order in which they appear in 46 CFR to facilitate a more logical presentation of the vessels included within each class:

Subchapter H: PASSENGER VESSELS (46 CFR Parts 70-89);

- ♦ **Passenger Vessels.** Vessels 100 Gross Tons (GT) and over carrying passengers for hire.
- ♦ Vessels of 100 GT and over carrying more than 12 passengers on an international voyage.

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VESSEL BOARDING LAWS, REGULATIONS, AND INTERNATIONAL CONVENTIONS (CONT.)

Operating Subchapters (cont.)

Cargo ships and tank ships may, without complying with Subchapter H, obtain a permit to carry up to 16 passengers on a domestic voyage (i.e., from one U.S. port to another U.S. port) and up to 12 passengers on an international voyage (i.e., in general terms, means going from one country to a foreign country).

Subchapter T: SMALL PASSENGER VESSELS (46 CFR Parts 175-187);

- ♦ **Small Passenger Vessels.** Vessels less than 100 GT carrying less than or equal to 150 passengers or overnight accommodations for less than or equal to 49 passengers and less than or equal to 200 feet.

Same exemption for cargo and tank ships noted above apply here.

Subchapter K: SMALL PASSENGER VESSELS (46 CFR Parts 114-122);

- ♦ **Small Passenger Vessels.** Vessels carrying more than 150 passengers or with overnight accommodations for more than 49 passengers and is equal to or less than 200 feet.
- ♦ **Subchapter K' (K Prime)** Small passenger vessels carrying more than or equal to 601 passengers or overnight accommodations for more than or equal to 151 passengers of greater than 200 feet. Even though K' are small passenger vessels, they are required to comply with parts 72 and 76 of Subchapter H, parts 114, 115, 117, 121 of Subchapter K and the applicable requirements of Subchapter F and J.

Vessels which do not carry these commodities as a regular business may be permitted to carry these liquids in bulk without complying completely with Subchapter D.

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VESSEL BOARDING LAWS, REGULATIONS, AND INTERNATIONAL CONVENTIONS (CONT.)

Operating Subchapters (cont.)

Subchapter D: TANK VESSELS (46 CFR Parts 30–40);

Tank Vessels. Vessels carrying flammable or combustible liquid cargo in bulk.

Vessels which do not carry these commodities as a regular business may be permitted to carry these liquids in bulk without complying completely with Subchapter D.

Subchapter I: CARGO AND MISCELLANEOUS VESSELS (46 CFR Parts 90–106);

- ♦ **Freight Vessels.** Motor vessels over 15 GT carrying freight for hire.
- ♦ Certain fishing vessels which dispense petroleum flammable or combustible liquids in bulk. (Part 105 only applies.)
- ♦ The following vessel types which are not inspected under any other Operating Subchapter:
 - ♦ Steam vessels (any gross tons).
 - ♦ Seagoing motor vessels (300 GT and over).
 - ♦ Barges which carry explosives or cargoes listed in Part 98 and Part 151.

Subchapter L: OFFSHORE SUPPLY VESSELS (46 CFR 125–136);

- ♦ **Offshore Supply Vessels.** Vessels including lifeboats that:
 - ♦ Are propelled by machinery other than steam.
 - ♦ Do not meet the definition of a passenger-carrying vessel in 46 USC 2102(22) or 46 USC 2101(35).
 - ♦ Are more than 15 but less than 500 gross tons.
 - ♦ Regularly carry goods, supplies, individuals in addition to the crew, or equipment in support of exploration, exploitation, or production of offshore mineral or energy resources.

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VESSEL BOARDING LAWS, REGULATIONS, AND INTERNATIONAL CONVENTIONS (CONT.)

Operating Subchapters (cont.)

Subchapter I-A: MOBILE OFFSHORE DRILLING UNITS (46 CFR 107-109);

- ♦ The following vessel types which are capable of engaging in drilling operations for exploration or exploitation on the subsea floor:
 - ♦ Steam vessels (any gross tons).
 - ♦ Seagoing motor vessels (300 GT and over).

Subchapter R: NAUTICAL SCHOOLS (46 CFR 166-169);

- ♦ Nautical School Vessels.
- ♦ Sailing School Vessels.

Subchapter O: CERTAIN BULK DANGEROUS CARGOES (46 CFR Parts 150-154);

- ♦ Tank Vessels which carry cargoes listed in Parts 151, 153, or 154.
- ♦ Barges inspected under Subchapter I which carry cargoes listed in Part 151 (e.g., Anhydrous ammonia).

Subchapter U: OCEANOGRAPHIC RESEARCH VESSELS (46 CFR 188-197);

- ♦ Oceanographic Research Vessels, defined in 46 USC 2101, are employed only in instruction or research in oceanography or limnology. Limnology is inland oceanography. These vessels are only excluded from inspection under one of the previous subchapters while it is operating strictly as an Oceanographic Research Vessel.

Note: Subchapters O and U are known as "special" operating subchapters because they deal with "special" conditions.

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VESSEL BOARDING LAWS, REGULATIONS, AND INTERNATIONAL CONVENTIONS (CONT.)

General and Engineering Subchapters

The General and Engineering Subchapters are usually applicable to all inspected vessels by reference within the text of the operating subchapters. These subchapters are as follows:

Subchapter E: LOAD LINES (46 CFR Parts 41–46);

- ◆ Details vessels required to have a load line assigned for specific routes and standards of construction to ensure watertightness.

Remember in the Introduction to Cargo and Passenger Vessel lesson, load lines are assigned and marked on the side of the vessel to limit the draft to which the vessel can be loaded.

Subchapter F: MARINE ENGINEERING (46 CFR Parts 50–64);

- ◆ Details requirements for construction, installation and testing of marine engineering systems: Boilers, Pressure Vessels, Piping Systems.

Subchapter G: DOCUMENTATION AND MEASUREMENT OF VESSELS (46 CFR Parts 66–69);

- ◆ Details requirements for documenting a vessel under U.S. registry, and for determining the gross tonnage, allowable exemptions and deductions, and the net tonnage.

The importance of vessel measurement should be apparent by now; the admeasured gross tonnage alone may force a vessel to be an "inspected vessel."

Subchapter J: ELECTRICAL ENGINEERING (46 CFR Parts 110–113);

- ◆ Details requirements for all electrical installations on inspected vessels.
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VESSEL BOARDING LAWS, REGULATIONS, AND INTERNATIONAL CONVENTIONS (CONT.)

General and Engineering Subchapters (cont.)

Subchapter Q: EQUIPMENT, CONSTRUCTION, AND MATERIALS: SPECIFICATIONS AND APPROVAL (46 CFR Parts 159–164);

- ◆ Details specifications for equipment and materials which must be U.S. Coast Guard approved.

Subchapter S: SUBDIVISION AND STABILITY (46 CFR Parts 170–174);

- ◆ Details stability requirements and watertight boundaries necessary for vessel survivability.

Subchapter W: LIFESAVING SYSTEMS FOR CERTAIN UNINSPECTED VESSELS (49 CFR Part 199);

- ◆ Details consolidation of lifesaving system regulations for large commercial vessels and the incorporation of SOLAS, Chapter III. Subchapter W also covers additional requirements, exemptions, and alternatives for non-SOLAS vessels.

33 CFR 1–199

In addition to the regulations in 46 CFR (Shipping) there are regulations located within Title 33 CFR (Navigation and Navigable Waters) which relate directly to vessel inspection, by way of their impact on the United States environment or navigation safety. The following subchapters of Title 33 CFR apply to most inspected vessels:

Subchapter O: POLLUTION (33 CFR Parts 150–159);

- ◆ These regulations detail the construction, equipment, and operational requirements on vessels, as well as onshore, to prevent or minimize pollution of waters of the U.S. These regulations are based upon a number of antipollution laws and international treaties.

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VESSEL BOARDING LAWS, REGULATIONS, AND INTERNATIONAL CONVENTIONS (CONT.)

33 CFR 1-199 (cont.)

Subchapter P: PORTS AND WATERWAYS SAFETY (33 CFR Parts 160-167);

- ♦ The regulations within this subchapter affecting vessel inspection detail navigation equipment installation and testing, and operational requirements. These regulations are based upon the Ports and Waterways Safety Act, as amended.

Because these requirements found in 33 CFR were not prescribed under inspection laws, they also apply to many vessels which are not subject to inspection. These vessels are classed as uninspected vessels.

Uninspected Vessels

Public vessels (vessels owned and operated by the United States or a foreign country) and commercial vessels not included as "inspected vessels" listed in 46 USC 3301 are exempt from inspection for certification. The uninspected commercial vessels still must comply with certain minimum safety regulations:

Subchapter C: UNINSPECTED VESSELS (46 CFR Parts 24-28);

- ♦ These regulations detail the requirements for lifesaving and fire protection equipment, and operating requirements for the following vessels not otherwise included as an inspected commercial vessel:
 - ♦ Motor vessels engaged in commercial fishing. There are some exceptions, but most fishing vessels do not require inspection.
 - ♦ Self-propelled vessels, other than steam, carrying six or less passengers.
 - ♦ Seagoing motor vessels of less than 300 GT.
 - ♦ Seagoing barges (excluding tank barges).

Subchapter S: BOATING SAFETY (33 CFR Parts 173-187);

- ♦ The regulations within this subchapter cover manufacture requirements and associated equipment specifically for recreational vessels.
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Watchkeeping 1978 (STCW) VESSEL BOARDING LAWS, REGULATIONS, AND INTERNATIONAL CONVENTIONS (CONT.)

International Standards

At one time the United States was a maritime power. Our trading needs were met by a large United States flag merchant fleet. Those days have long since passed. Ninety-eight percent of the cargo which comes into the United States is now transported on foreign flag ships. In response to this increased risk, the Coast Guard is shifting inspection resources from United States flag vessel inspections to foreign vessel examinations. Under port state control we will ensure that the vessels which call in our waters meet international standards designed to protect people, property, and the environment. To do that an increased skill level in the applicable international rules/conventions is needed.

About 30 years ago, our shipping regulations were considered superior to the international standards. Due to recent progress through the International Maritime Organization (IMO), the conventions and standards which are now in effect for the majority of the world's shipping tonnage are considered equivalent to our standards. The future promises a harmonizing of our regulations and international standards to allow the remaining United States flag vessels to compete on an even playing field with the rest of the world's shipping tonnage.

There are currently 33 different international conventions/standards which the United States recognizes. Among the best known ones are:

- ◆ Safety of Life at Sea (SOLAS) 74/78
- ◆ International Convention for the Prevention of Pollution From Ships (MARPOL) 73/78
- ◆ International Load Line Convention of 1966.
- ◆ International Convention on Standards of Training, Certification and

When the Coast Guard conducts an inspection of a United States flag vessel, we issue certificates attesting to the fact that the vessel meets applicable international standards. When we examine foreign flag vessels in our waters to ensure the safety of our ports, we examine them for compliance with the applicable international conventions.

BOARDING TYPES

Introduction

There are many types of boardings conducted by the Coast Guard. The term "boarding" means attending a vessel to conduct Coast Guard business. Each boarding type is designed for a specific purpose. The types of boardings a marine inspector typically gets involved with include:

- ◆ Inspections
- ◆ Examinations
- ◆ Investigations

WARNING: It is very important to remember that when you board a vessel to conduct a boarding, the words "to conduct a boarding" do not get confused with your role in the boarding, especially with regards to your personal safety. This means at times you will need certain safety equipment tested to ensure it is in compliance with applicable regulations or manufactures specifications. Your role here is very important. You must always witness the test of equipment, NEVER conduct the test yourself.

Even as you witness the testing of equipment, you should keep in mind those personal safety situations addressed in the Occupational Safety and Health lesson you previously learned about. Always evaluate every situation and assess the degree of hazard posed by the situation before making any decision about your personal safety. And finally, use good common sense.

Requirements for frequency of boardings are based on legal/regulatory mandates and the COTP/OCMI assessment of risk factors for a particular vessel. Assessments are based on the following risk factors:

- ◆ owners
 - ◆ flag states
 - ◆ classification societies
 - ◆ vessel histories
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BOARDING TYPES (CONT.)

Inspections

An inspection is a complete survey of the material condition of a U.S. vessel by a qualified marine inspector. This is the most detailed type of boarding and is required on United States flag merchant vessels. Typical examples are:

<u>Vessel Type</u>	<u>Inspection Type</u>	<u>Frequency</u>
U.S. Tank vessels	Certification	Every 2 years
	Mid-period	10th & 14th month
	Hull and tank internals	2 times every 5 years
U.S. Cargo vessels	Certification	Every 2 years
	Mid-period	10th & 14th month
	Hull and tank internals	2 times every 5 years
U.S. Passenger vessels	Certification	Annually
	SOLAS hull	Annually

Examinations

An examination is a less rigorous (than inspection) check for compliance with pollution prevention, cargo stowage/segregation, general safety, MARPOL, and SOLAS regulations on foreign vessels. An examination includes a thorough check of documents, certificates, navigation safety requirements, firefighting equipment, and pollution prevention requirements. On foreign tank ships, the examination includes verification that the cargo venting and handling systems are in satisfactory condition, and the inert gas system, if applicable, is operating satisfactorily.

Examinations are normally conducted by a qualified marine inspector and a qualified port safety boarding officer.

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BOARDING TYPES (CONT.)

Investigation

Boarding are often conducted on a vessel in the course of a marine casualty or accident investigation. A marine casualty or accident means an accident involving a vessel, other than public vessels, if such casualty or accident occurs upon the navigable waters of the United States, its territories or possessions. Also, any casualty or accident wherever such casualty or accident may occur, involving any United States' vessel which is not a public vessel.

The term marine casualty or accident includes any accidental grounding, or any occurrence involving a vessel which results in damage by or to the vessel. This includes:

- ♦ apparel
- ♦ gear
- ♦ cargo
- ♦ injury or loss of life of any person, including divers
- ♦ collisions
- ♦ strandings
- ♦ groundings
- ♦ foundering
- ♦ heavy weather damage
- ♦ fires
- ♦ explosions
- ♦ failure of gear and equipment
- ♦ other damage which might affect or impair vessel seaworthiness

Vessels are boarded for other investigations, such as pollution investigations or personal investigations against licensed and documented U.S. merchant mariners.

MERCHANT MARINER LICENSES AND DOCUMENTS

Introduction

The Coast Guard is responsible for the testing and licensing of U.S. merchant mariners. This section explains the basics of Coast Guard licensing. The Marine Licensing Program issues two basic categories of documentation to qualified merchant mariners. They are:

- ♦ documents
- ♦ licenses

The requirements for issuing licenses and documents are found in Marine Safety Manual Volume III.

Types

There are different types of licenses or documents that reflect the position the mariner can hold on board the ship. These are listed below:

TYPE	POSITION
Documents	Able Bodied Seaman Ordinary Seaman Qualified Member of the Engineering Department Steward Tankerman Lifeboatman
Licenses	Master Mate Pilot Engineer Radio Officer Staff Officer

These merchant vessel positions are thus classified as either "documented" or "licensed" positions.

Additional requirements for passenger vessels and cargo vessels that carry passengers include:

- ♦ Purser
 - ♦ Surgeons
 - ♦ Medical Doctors
 - ♦ Professional Nurses
 - ♦ Pharmacists Mate
 - ♦ Cooks/Messmen
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MERCHANT MARINER LICENSES AND DOCUMENTS (CONT.)

Unlicensed Crewmembers

There are certain positions on merchant vessels which do not require licenses or documents. They are:

- ♦ Deck hands on small passenger vessels.
 - ♦ Deck hands or cooks on uninspected towing vessels.
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VESSEL MANNING REQUIREMENTS

Introduction

As discussed earlier, vessel manning regulations are found in 46 CFR Subchapter B, Part 15. Guidelines for vessel manning can be found in Marine Safety Manual Volume III.

Departments

There are four main departments on merchant vessels. These include:

- ♦ **Deck** – Responsible for supervising the handling and storage of cargo, navigation and piloting, operation of electronic navigation equipment, communications, maintenance, use of firefighting and lifesaving equipment, vessel handling, and trim and stability of the vessel.
 - ♦ **Engineering** – Responsible for the operation of the vessel's machinery and accompanying systems, maintenance of all machinery and systems (this includes all machinery and systems outside of the machinery spaces).
 - ♦ **Steward** – Responsible for feeding the crew and passengers, operation of the galley, pantry, messrooms, storerooms, dry and refrigerated stores, lockers and linen baggage and cleaning gear.
 - ♦ **Staff** – This department is found only on passenger vessels and cargo vessels which carry passengers. It is responsible for providing services and medical care for passengers.
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VESSEL MANNING REQUIREMENTS (CONT.)

Officers and Crew

Crew compliments and requirements are set up according to vessel type, size, cargo, and destination. Positions and job descriptions for officers and crew of merchant vessels are listed below:

- ♦ **Masters** are in overall charge of the vessel. The master is the owner's/operator's representative for the vessel. They do not stand watches.
- ♦ **Pilots** serve a specialty position on commercial vessels. They act as a guide of the vessel when it is coming into port, and normally board the vessel just prior to pulling into port. Masters and mates on U.S. vessels can qualify for this position in U.S. waters.
- ♦ **Chief mates** are responsible for cargo loading, regardless of the type of vessel or cargo. They are also responsible for maintaining the stability and general operations of the vessel outside of the engineering department. The chief mate is the administrator for all paperwork and documents for the deck department. He also stands bridge watches.
- ♦ **Second mates** are normally designated as the navigation officer. They work for the chief mate, conduct routine work necessary during their bridge watches, and may also be responsible for cargo transfer operations inport.
- ♦ **Third mates** work for the chief mate and conduct routine work necessary during their bridge watches. They are responsible for the maintenance of the lifesaving equipment.
- ♦ **Radio Officers** operate and maintain the vessel's radio equipment. They do not normally stand watches.
- ♦ **Boatswain** is the able bodied seaman who heads the deck maintenance section of the deck department. The boatswain supervises the ordinary seaman in routine maintenance and is responsible for maintaining the cargo gear and general upkeep of the vessel within the deck department. They do not normally stand watches.
- ♦ **Able bodied seaman** normally serve as helmsman and lookouts. They are also qualified to operate the vessel's lifeboats. Able bodied seaman make up 65% of the deck crew.
- ♦ **Ordinary seaman** is the entry rating in the deck department. For the most part, they carry out the cleaning and upkeep function as well as stand helmsman and lookout watches.

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VESSEL MANNING REQUIREMENTS (CONT.)

Officers and Crew (cont.)

- ♦ **Chief Engineers** have the overall responsibility of the engineering department. The chief engineer is responsible for the maintenance and repairs of the deck machinery and the vessel's hydraulic and electrical systems. As with the master, there is only one chief engineer. The chief engineer holds the highest level of license in the engineering department and is considered equal to the master in status. However, the chief engineer is a member of the crew and is responsible to the master. They do not stand watches.
- ♦ **First assistant engineers** are responsible for the overall supervision of the engine room and for the major maintenance and repair of machinery and various system components. The first engineer also stand watches.
- ♦ **Second assistant engineers** are responsible for the main propulsion machinery and stand watches.
- ♦ **Third assistant engineers** are responsible for auxiliary machinery and general upkeep of the engineering department as well as standing watches.
- ♦ **Qualified members of the engine department (QMED's)** are made up of several ratings. They are:
 - ♦ Refrigeration engineer
 - ♦ Deck engineer
 - ♦ Fireman/watertender
 - ♦ Junior engineer
 - ♦ Electrician
 - ♦ Machinist
 - ♦ Pumpman
 - ♦ Deck engine mechanic
 - ♦ Engineman
- ♦ **Oilers** are responsible for engine room upkeep and minor maintenance of machinery. They also stand watches.
- ♦ **Wiper** is the entry level rating for the engineering department. They perform a similar function in the engineering spaces as the ordinary seaman do on deck.
- ♦ **Tankerman** is any person holding a certificate issued by the Coast Guard attesting to competency in the handling of certain liquid cargoes in bulk. Licensed masters, mates, pilots, and engineers may also serve as tankerman.

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VESSEL MANNING REQUIREMENTS (CONT.)

Officers and Crew (cont.)

- ♦ **Stewards** work whether the vessel is in port or underway. They serve the crew (and on certain vessels the passengers) in various functions including meals and janitorial services. There are four positions of stewards:
 - ♦ **Chief steward** is head of the department.
 - ♦ **Stewards** assist the chief steward.
 - ♦ **Cooks.**
 - ♦ **Messman** serve food and conduct janitorial services under the supervision of the chief steward.
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Self Quiz 4

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